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ABSTRACT

Psychological characteristics of students who received the highest ratings in both student and professional teaching were examined and compared to those of students who rated the lowest in both fields. Although the resulting profiles from the two groups did not differ significantly, trends indicated that the more successful group had a good self image and were poised and self assured. The less successful teachers, although seemingly more independent, tended to score lower on measures of trust, self control, and responsibility. Capsule descriptions of the personality traits examined are appended. (Author/CJ)

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A PERSONALITY PROFILE OF STUDENTS WHO ARE SUCCESSFUL IN STUDENT TEACHING AND IN TEACHING

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ABSTRACT

Measurement of qualities of character are somewhat elusive; however, this study attempted to create a psychological profile which would describe students who were successful in student teaching and experienced subsequent success in teaching. The psychological characteristics (measured by the Q-Sort, D-Scale, C.P.I. and 16 P.F.) of the students who received the highest ratings in both student teaching and teaching were examined and were compared with those of teachers who had been rated lowest in student teaching and teaching. Although the resulting profiles from the two groups did not differ significantly, trends indicated that the more successful group had a good self-image and were poised and self-assured. The less successful teachers, although seemingly more independent, tended to score lower on measures of trust, self-control and responsibility.

Introduction

The number one concern of teacher education programs is to ensure that their graduates will become capable and effective teachers. This goal implies that teacher education programs do prepare teachers, and that teachers are truly made not born. However, if all students go through the same program, then what factors contribute to their later relative success and failure? Are there certain psychological and personal qualities which are more amenable to the formation of good teachers?

The purpose of this study was to determine whether there are certain psychological characteristics which would differentiate those student teachers who ultimately succeed in teaching from those student teachers who do not. If there is a difference between these groups, does a definable profile for those successful both in student teaching and in teaching ensue? Certainly a great deal of time, effort, and money could be saved or spent more effectively on teacher preparation if students going into teacher preparation possessing characteristics similar to those who ultimately do not succeed could be identified and counselled out of teacher training at the onset. Because of the small sample size, this study should be viewed as a pilot study.

The University of Lethbridge has been collecting data on the effectiveness of its teacher education program and its graduates in a longitudinal project known as QAULTEP[1]. This project has been described at great length in a presentation to AERA (Dravland and Greene, 1979), as well as in many other studies using this data. This particular

[1] QAULTEP is an acronym for the Qualitative Analysis of the University of Lethbridge Teacher Education Program.

paper represents another facet of the initial study (Greene and Dravland, 1979), which did two things: it examined the teaching effectiveness of the University of Lethbridge graduates, and it related the various components of their success to their performance within the teacher training program. It was found that, although there appeared to be a definite relationship between success in the program and success in teaching, individual components of the program were not good predictors of teaching success.

Purpose and Objectives of the Study

The purpose of this study is to examine the psychological characteristics of the two groups of students who were rated by their supervisors in student teaching and by their principals in teaching as extremely successful (high) or marginally successful (low) on three different rating scales.

Specifically, the objectives of this study were to:

1. determine whether any differences existed between the psychological characteristics of these two groups.
2. examine the characteristics of the two groups for trends which would lead to the development of a psychological profile for each of the two groups.
3. make recommendations for follow-up studies on the successive populations of QAULTEP for which data is being collected (this study is mainly exploratory in nature).

Literature Review

The quest for the makings of a good teacher has led to volumes of research into teacher education programs and evaluations of practicing teachers. Numerous studies reviewed by Hamachek (1969) have dealt with the actual characteristics of good and poor teachers. For instance, Hamachek insists that good teachers do exist and can be identified. Essentially, his compilation of characteristics of good teachers suggests that a good teacher is simply a good person (i.e. a healthy, mature, flexible, warm adult).

Good classroom teaching is the ultimate goal of all teacher education programs; however, is there a relationship between teacher education programs and the teacher in the field? Investigators have traditionally used two criteria of teaching success (1) assessment based on observation and (2) pupil achievement. The main predictors that have been examined are interviews, academic qualifications, and personality measures. Tarpey (1965) concludes from his study on student teachers that the pre-education interview score accounted for 13.6% of the variation between survivors and non-survivors in teaching. Every one of the non-survivors scored below the average for the total sample on a pre-education interview. Pratt (1977) supports the structured interview as a way to select student teachers into teacher education programs. In his study, teachers who withdrew from teaching within three and a half years of graduation were distinguished by their lower scores on pre-admission interviews.

The attitude that success should be quantifiable pervades the literature. Cattell's sixteen personality factors (1956) have been used in a variety of studies. Warburton, Butcher, and Forest (1963) have found the 16 P.F. to be a fair predictor of teaching mark; in addition he states

that conscientiousness (G+), tender-mindedness (I+), and control (Q3+) exhibited significant relationships with teaching ability. Barr (1961) also using the 16 P.F. found that conscientiousness (G+), control (Q3+) and practicality (M-) were positively related to teaching success. Start (1966) however, found that his successful teachers tend to be less controlled and less practical than those of lesser ability.

It will be noted however that good classroom teaching may require different attributes other than that of academic success. Cortis (1968), for example, suggests that there may be an "apparent" dichotomy between professional and academic criteria of success. His study found that correlates of classroom success included previous teaching experience, lower verbal fluency, and naturalistic and tender-minded (16 P.F.) attitudes to education. On the other hand, correlates of high academic success included sound entrance qualifications, high verbal ability, and idealistic and tough-minded attitudes (16 P.F.) to education.

Some of these inconsistencies may arise from the lack of separating student teachers by subject matter or level taught. Henjam (1969) states that different characteristics identified by the 16 P.F. were related to student teaching success at different levels of teaching. Success of student teachers at the senior high level was related to high intelligence and enthusiasm, whereas success at the junior high level was related to emotional maturity, inclination to experiment, extroversion, and social adjustment.

In another study McClain (1968) used the 16 P.F. to determine whether differences between the sexes exist. He found that successful male student teachers at the secondary level were (G+) conscientious, (H+) venturesome, and (L-) trusting. The female student teachers were

(B+) more intelligent, (E+) assertive, and (H+) venturesome; they were also more (F+) happy-go-lucky, (A+) outgoing and (Q3+) controlled. McClain generally described the successful male student teacher as having control, sobriety, steadiness, a sense of responsibility, non-competitiveness, and freedom from tension. The successful female student teacher tended to have more competence, energy, enthusiasm, spontaneity, and a greater sense of basic joie de vivre. In a combined profile from the 16 P.F. for both successful male and female student teachers, McClain found that of the 16 personality variables in the study, only three appeared common to both sexes: they are (A+) outgoing, (B+) intelligent, and (H+) venturesome.

Lamke (1951) has reported that being (A+) outgoing and (H+) spontaneous may distinguish good from poor teachers. Four factors obtained from the 16 P.F. by Davis and Satterly (1969) differentiated the students of 'high' and 'low' teaching ability. The high group were exemplified by tough-mindedness (I), confidence (O), relaxed behavior (Q4) and conscientiousness (G).

Like the 16 P.F., the California Personality Inventory (Gough, 1957) has appeared in the research on teacher characteristics. Using the C.P.I., Veldman and Kelly (1965) noted significant differences between means of effective and ineffective student teachers; the effective teachers obtained consistently higher mean scores on all 18 scales. It was also noted that student teachers rated higher by their supervising professors differ from those rated lower on many dimensions reflecting aspects of ego-strength. Veldman and Kelly concluded that effective student teachers were considered more friendly and in firmer control of their classes than were

ineffective teachers. Effective teachers indicated greater tendencies toward self-acceptance, social dominance, and acceptance of traditional authority. Hill's (1968) study predicting teaching effectiveness from the C.P.I. suggests two profiles differing along sex lines as well. The successful males scored highest on scales of conscientiousness and practicality, and the females scored highest on scales of dominance and perseverance.

Vittetoe (1977) typifies the 'inadequate' first year teachers in a 10-year study by the following characteristics: lack of control, lack of maturity, lack of organization, and lack of confidence. Characteristics exemplifying the teachers considered to be 'superior' were class control, rapport with parents, flexibility, and knowledge of subject matter. A further finding was that student teachers who take a first position in a situation dissimilar to that of the student teaching year tend to be rated as less successful.

Ryans (1964) selected two criterion groups from elementary and secondary teachers; 'high' and 'low' groups were comprised of those teachers who received uniformly high or uniformly low scores respectively on three major patterns of classroom behavior. Characteristics that distinguished the "lowly assessed" teacher group from the "highly assessed" suggested that the relatively "ineffective" teacher is self-centered, anxious and restricted. The "highly assessed" teachers rank high with respect to observable classroom behaviors such as warmth and kindliness, systematic and business-like manner, and stimulating and original teacher behavior.

The kinds of attributes associated with the ineffective teacher (self-

centered, anxious, restricted) may be similar to the attributes measured by Rokeach's Dogmatism Scale (1956). The D-Scale attempts to rate open and closed systems of belief. Soderbergh (1964) concluded that "some veteran public school teachers are excessively, and for the most part unwittingly, dogmatic." On the other hand, Rabkin (1966) using the D-Scale, found that experienced teachers are not necessarily more closed-minded than university students or any other comparable group. Capelluzzo (1969), using the D-Scale, found that among students at the University of Massachusetts, prospective teachers as a group are neither more nor less dogmatic than state university students in general. Capelluzzo concluded from the evidence of studies to date that prospective teachers, like university students in general, are more dogmatic than experienced teachers.

In view of the research on personality tests to date, it is interesting to note that no conclusive findings are apparent. Certainly none of the previous studies have used personality tests to characterize those individuals who are both successful in student teaching and successful teachers, versus those who are not. This study will attempt a preliminary examination of these characteristics and this line of research.

Methodology

The sample consisted of eleven teachers in the 'high' group and five teachers in the 'low' group selected from the teachers in the previous study (Greene, 1979). Those who were rated consistently high on three criteria were considered the 'high' group and those who received consistently low ratings on all three criteria comprised the 'low' group. Those selected for inclusion in the high group received a rating of 4 or

5 from their teacher associates on performance in student teaching (1 - 5 scale); a 4 or 5 rating by the principal on a global assessment of teaching; and a rating of 8 to 10 by the principal in relation to all other teachers the principal ever encountered. The low group was comprised of the students who were rated 3 or below by their teacher associate in student teaching, received a rating of 3 or less from the principal on a global assessment of teaching, and were rated as 7 or less by the principal in relation to all the teachers he had ever encountered.

All of the data on the psychological tests had been gathered during a pre-education semester. This usually takes place prior to the students' admission to the teacher education program which follows two years undergraduate training in Arts and Science. The psychological tests included in the battery are the D-Scale (Rokeach, 1956), the Q-Sort (Block, 1961), Cattell's Sixteen Personality Factors (1957), and the California Personality Inventory (Gough, 1968). (See Appendix A for the description of these tests.) As sample size was small (N=16), descriptive analyses in addition to elementary statistical tests were deemed to be the most appropriate means of interpretating the data.

Results and Discussion

Scores on the psychological tests did not result in a profile which significantly differentiated between the members of the two groups. However, certain interesting trends were noted. Teachers in the low group obtained higher scores on the D-Scale than those in the high group (See Table 1). Not only did the teachers in the low group tend to be more dogmatic, they also seemed to be less sure of themselves

TABLE 1

COMPARISON OF MEAN SCORES OF HIGH AND LOW GROUPS OF TEACHERS BY PSYCHOLOGICAL TEST SCORES

	Low Group Teachers		High Group Teachers	
Psych. Test Name	Mean	S.D.	Mean	S.D.
D Scale	112.2	20.66	100.64	18.9
Q Sort	63.40	20.91	73.18	24.62
A 16 PF	5.40	1.14	5.09	1.45
B 16 PF	7.00	.71	6.00	1.41
C 16 PF	7.00	1.22	6.09	1.70
E 16 PF	6.40	.55	5.73	2.10
F 16 PF	5.80	2.17	6.00	1.79
G 16 PF	6.60	1.95	6.18	1.33
H 16 PF	6.20	.45	6.55	1.86
I 16 PF	5.40	1.95	5.45	2.11
L 16 PF	5.80	2.28	5.00	2.28
M 16 PF	6.20	1.92	5.73	1.68
N 16 PF	4.40	1.52	5.00	2.72
O 16 PF	5.60	.89	5.09	1.45
Q_1 16 PF	5.40	.89	5.73	2.45
Q_2 16 PF	5.20	2.59	5.64	1.69
Q_3 16 PF	7.00	2.00	6.73	1.49
Q_4 16 PF	4.80	1.64	4.82	1.33

	Low Group Teachers		High Group Teachers	
	Mean	S.D.	Mean	S.D.
Do CPI	52.2	11.5	59.1	13.9
Cs CPI	48.6	7.5	55.4	12.6
Sy CPI	55.2	9.5	57.3	7.3
Sp CPI	58.4	11.6	64.2	7.7
Sa CPI	55.8	8.3	57.5	14.1
Wb CPI	48.0	7.3	50.9	6.1
Re CPI	40.2	13.6	46.9	8.0
So CPI	44.4	12.9	46.9	9.8
Sc CPI	45.2	13.9	42.9	8.2
To CPI	47.6	14.7	51.5	8.2
Gi CPI	52.2	15.7	43.8	6.8
Cm CPI	47.4	13.0	51.2	9.0
Ac CPI	46.2	12.5	53.5	8.5
Ai CPI	57.4	12.4	52.1	10.4
Ie CPI	52.8	11.9	55.2	7.7
Py CPI	54.4	6.7	54.3	7.8
Fx CPI	57.4	12.7	51.8	6.6
Fe CPI	46.0	11.8	49.5	12.0

as exemplified by the low correlation (r=.63) between real and ideal self on the Q-Sort (See Table 1). The high group showed a more integrated sense of self with a higher correlation between the real and the ideal self (r=.73). Strong correlations were found for the entire sample between the Q-Sort and the 16 P.F. sub-scales of trusting (L) (r=.72), and relaxed (Q4) (r=.70).

The profiles (See Table 2) developed from the mean scores of the high and low groups can be viewed as suggestive of the two contrasting types of persons in the teaching profession. First it must be noted that all the scores on the sub-tests of the 16 P.F. are normal and within one standard deviation from the mean. As indicated by the scores on the 16 P.F., both groups could be characterized as normal individuals, who are somewhat outgoing, intelligent, emotionally stable, unpretentious, venturesome and controlled. Controlled (Q3) was the highest score for both groups; Cattell (1957) characterizes the high (Q3) individual as one who "shows socially approved character responses, self-control, persistence, foresight, considerateness of others, conscientiousness, and regard for etiquette and social reputation". The low group scores were higher although they are insignificant on indices relating to intelligence, emotional stability, and suspiciousness.

The profiles resulting from scores on the California Personality Inventory were ambiguous (See Table 3). Scores on 17 or the 18 subscales of this study clustered tightly around the mean. The single exception was the Sp (social presence) score ($x = 64.2$) of the high group of teachers; however, before drawing any conclusions about the ebullient, spontaneous nature of these students, it must be noted that the highest score for the low group ($x = 58.4$) was also obtained

TABLE 2

COMPARISON OF MEANS OF HIGH AND LOW GROUPS OF TEACHERS ON THE 16 P.F.

IPAT PERSONALITY PROFILES
#2 September, 1968

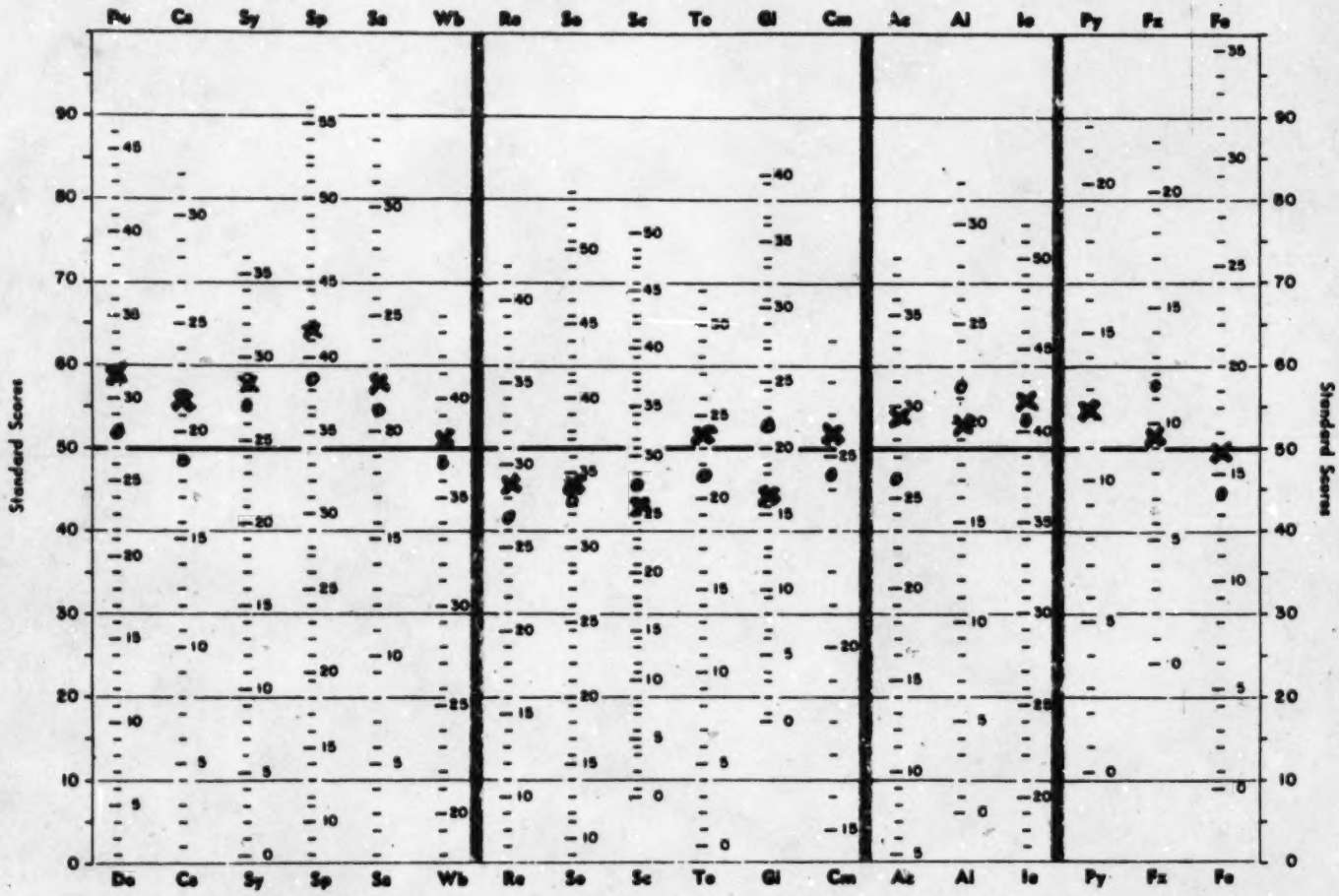
CENTILE RANK	FACTOR	TRAIT DESCRIPTION for scores on left side of grid	1	2	3	4	5	6	7	8	9	10	TRAIT DESCRIPTION for scores on right side of grid
	Primary												
71	A	RESERVED, critical	.	.	.	.	⊗	.	.	.	.	.	OUTGOING warmhearted
79	B	LESS INTELLIGENT	.	.	.	.	.	X	O	.	.	.	MORE INTELLIGENT
84	C	EMOTIONALLY LESS STABLE	.	.	.	.	.	X	O	.	.	.	EMOTIONALLY STABLE
57	E	SUBMISSIVE, accommodating	.	.	.	.	.	XO	.	.	.	.	AGGRESSIVE assertive
75	F	SERIOUS, quiet	.	.	.	.	.	OX	.	.	.	.	HAPPY GO LUCKY enthusiastic
78	G	LESS RIGID, casual	.	.	.	.	.	X	O	.	.	.	STAID, perseverring
86	H	TIMID, shy	.	.	.	.	.	O	X	.	.	.	VENTURESOME uninhibited
40	I	TOUGH MINDED, realistic	.	.	.	.	.	XO	.	.	.	.	SENSITIVE
19	L	TRUSTING, adaptable	.	.	.	.	X	O	.	.	.	.	SUSPICIOUS
28	M	PRACTICAL, careful	.	.	.	.	.	XO	.	.	.	.	IMAGINATIVE impractical
74	N	UNSOPHISTICATED, naive	.	.	.	.	OX	.	.	.	.	.	SHREWD, sophisticated
18	O	CONFIDENT, serene	.	.	.	.	XO	.	.	.	.	.	APPREHENSIVE worrying
68	Q_1	CONSERVATIVE, traditional	.	.	.	.	.	OX	.	.	.	.	EXPERIMENTING analytical
24	Q_2	GROUP DEPENDENT	.	.	.	.	.	OX	.	.	.	.	SELF-SUFFICIENT
86	Q_3	FOLLOWS OWN URGES	.	.	.	.	.	.	XO	.	.	.	CONTROLLED
9	Q_4	RELAXED	.	.	.	.	XO	.	.	.	.	.	HIGH TENSION LEVEL

X = High Group

O = Low Group

TABLE 3

COMPARISON OF MEANS OF HIGH AND LOW GROUPS OF TEACHERS ON THE C.P.I.



Do	Co	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Al	Ie	Py	Py	Fe
59.9	55.4	52.3	64.2	57.5	50.9	46.9	46.9	42.9	51.5	43.8	51.2	53.5	52.1	55.2	54.3	51.8	49.5
53.2	49.6	55.2	58.4	55.8	48.0	40.2	44.4	45.2	47.6	50.2	47.4	46.2	57.4	52.8	54.4	57.4	46.0

X = High Group

O = Low Group

on this item and this description applies to both groups.

The means of the high group were higher than the low group on 15 of the 18 sub-scales and in fact Vittetoe (1977) found higher means for his successful teachers on all C.P.I. scales. The low groups scored 8 points higher than that of the high group on the scale (Gi) faking good impression. Although both groups' scores fall within one standard deviation of the mean, the question is raised, why do the low teachers wish to represent themselves in a particularly favorable manner?

The low group achieved higher scores than the high group on the items (Fx) flexibility and (Ai) achievement independent; these descriptors seem to contradict the image of the dogmatic, rigid, insecure personality of the unsuccessful teacher as suggested earlier. Perhaps this flexibility and independence are viewed as inappropriate behavior by raters. The low group obtained the lowest scores on the C.P.I. on (Re) responsibility, (Sc) self-control, (Ac) achievement via conformity and (Cm) communality.

The 18 scales of the C.P.I., may be grouped into four classes (Gough, 1957). Although there is very little difference encountered between group means of the high and low groups of teachers, when the means of their classes are examined, the high group teachers rate higher on three of the four classes (Table 4). These three classes measure self-assurance, maturity and responsibility, and intellectual efficiency.

The question whether different personality characteristics would appear if a different rating criteria were imposed, remains unanswered. However, a profile of the kinds of individuals who go through student teaching and the first year of teaching has emerged. Perhaps the similar characteristics of both the high and low groups of teachers is indicative of the kinds of individuals who elect to enter teaching and are willing to subjugate their needs to the rigours of the program. Caution must be taken in not over-

TABLE 4

COMPARISON BY C.P.I. CLASS OF HIGH AND LOW GROUP MEAN SCORES

	Low Group	High Group
Class I (Measures of Poise Ascendancy, & Self-Assurance) (Do - Wb)	53.03	57.52
Class II (Measures of Socialization, Maturity, & Responsibilty) (Re - Cm)	46.17	47.20
Class III (Measures of Achievement Potential and Intellectual Efficiency (Ac-Ie)	52.13	53.58
Class IV (Measures of Intellectual and Interest Modes. (Py-Fe)	52.6	51.85

interpreting these findings as indications of the conforming personality.

The similarities of the students in the high and low groups may be explained in a variety of ways. The very small sample size in itself allows for little range of differences. The size and location of the teacher education program exerts a certain selection influence on the kinds of students who apply to the program. As the options are limited in this small university, teaching may be the only alternative.

Another explanation for the overlapping profiles, might be the criteria employed in rating the teachers. No attempt was made to ensure that the criteria used by the teacher associates for rating the individuals as student teachers was even similar to that used by the principals for rating them later as teachers. In addition, inter-rater reliability was not established between either of the groups of raters.

It has been suggested that principals may rate higher those teachers who exhibit attitudes and beliefs similar to their own (Anastasiow, 1966). In addition teachers may be rated highly for external qualities: quiet classrooms, dress code, etiquette, punctuality, and good lesson plans. All of the principals, as well as most of the supervisors rating the teachers, are men. Most of the teachers are women. Is there not a possibility that the female teachers who behave in ways more closely alligned with traditional female roles would be rated more highly? Certainly there is some evidence that practice teaching grades given to female student teachers by male supervisors favored those who were physically attractive (Hore, 1971). Selectivity or ratings may be more harsh on the unconventional, non-traditional teachers who might actually be very successful teachers in

the classroom. The high results of the C.P.I. (Fe) flexibility for the low groups brings this question to mind.

The high scores on the 16 P.F. (Q3) "control" of both groups may represent decisive, self-controlled individuals who can and do put aside their own immediate need gratification in order to pursue a more long range goal, even if the program itself may be more restrictive than their life style would dictate. Thus a controlled individual may be more in charge of his behavior than a conforming one even though both may manifest similar behavior.

Perhaps, as Veldman and Kelly (1965) suggested we must instead view the qualities characterized by the effective teachers in this study as survival qualities. The ability to manipulate and to influence change from within the system may be the key to changing the system in a very realistic way. Those individuals who are group conforming or willing to work within the system may, in fact, be exactly those who will be best suited to teaching and not exasperated by the inflexability of its parameters.

Although attaining the goals of this present study was limited by the sample size, certain trends have appeared which would justify further research into what personality traits characterize student teachers who are successful both in student teaching and in teaching. Certainly follow-up studies of first year teachers into the first five years of teaching, might clarify some of these questions. For example the attrition factor might be considered as another definition of unsuccessful teaching as suggested by Pratt (1977).

However, are we not back at square one again? Hamachek's study (1969)

clearly spells out the ingredients which, we do seem to agree, characterize the good teacher. Put quite simply, he says that the good teacher is basically a good person. Is this goodness not simply the quality of maturity--maturity to make decisions and accept the consequences, maturity to plan and be on time, maturity to know one's own limitations, and perhaps most important of all, the maturity to feel good about one's self and expect the best of others?

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APPENDIX A

From: Manual for Forms A and B
Sixteen Personality Factor Questionnaires
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Capsule Descriptions of the Sixteen Primary Personality Factors

(more technical titles are in parentheses)

FACTOR A

Low Score Direction

Reserved, Detached, Critical, Cool
(Sizothymia, previously Schizothymia)*

The person who scores low (sten of 1 to 3) on Factor A tends to be stiff, cool, skeptical, and aloof. He likes things rather than people, working alone, and avoiding compromises of viewpoints. He is likely to be precise and "rigid" in his way of doing things and in personal standards, and in many occupations these are desirable traits. He may tend, at times, to be critical, obstructive, or hard.

vs.

High Score Direction

Outgoing, Warmhearted, Easy-going, Participating
(Affectothymia, previously Cyclothymia)*

The person who scores high (sten of 8 to 10) on Factor A tends to be goodnatured, easy-going, emotionally expressive (hence naturally Affectothymia), ready to cooperate, attentive to people, softhearted, kindly, adaptable. He likes occupations dealing with people and socially-impressive situations. He readily forms active groups. He is generous in personal relations, less afraid of criticism, better able to remember names of people.

*Because of its excellent confirmation of the Bleuler and Kretschmer schizothymia-cyclothymia dimension, Factor A has been so named since its discovery some twenty years ago. Unfortunately, the less-informed general public has insisted on the dramatic association with the schizophrenic abnormality rather than the normal dry, withdrawn temperament. Worse, the literal translation as "split personality" has led to the erroneous association of a schizothyme with multiple personality—a disorder perhaps more likely to be found at the opposite end of the scale!

Accordingly, it seems best henceforth to refer to the A dimension as *Sizothymia* (sī·zō·thī'mĭ·ă) vs. *Affectothymia*. *"Sizo"* stresses the emotional detachment, dryness, or flatness of A- (*sizo* from *assidere*, as in the root for painter's *size* used to make colors "lie *flat*"). At the same time, it would improve the A+ reference to call it *Affectothymia*, emphasizing the affective rather than the cyclical aspect, since easy emotional expansiveness and contact are more central than mood swings. Associations with the abnormal projection, as in affective psychosis, may be present but have not been proved. The clearer distinction by sound of *Sizothymic* and *Affectothymic* should also assist oral discussion.

FACTOR B

Less Intelligent, Concrete-thinking
(Lower scholastic mental capacity)

The person scoring low on Factor B tends to be slow to learn and grasp, dull, given to concrete and literal interpretation. His dullness may be simply a reflection of low intelligence, or it may represent poor functioning due to psychopathology.

vs.

More Intelligent, Abstract-thinking, Bright
(Higher scholastic mental capacity)

The person who scores high on Factor B tends to be quick to grasp ideas, a fast learner, intelligent. There is some correlation with level of culture, and some with alertness. High scores contraindicate deterioration of mental functions in pathological conditions.

FACTOR C

Affected By Feelings, Emotionally Less Stable, Easily Upset
(Lower ego strength)

vs.

Emotionally Stable, Faces Reality, Calm, Mature
(Higher ego strength)

The person who scores low on Factor C tends to be low in frustration tolerance for unsatisfactory conditions, changeable and plastic, evading necessary reality demands, neurotically fatigued, fretful, easily emotional and annoyed, active in dissatisfaction, having neurotic symptoms (phobias, sleep disturbances, psychosomatic complaints, etc.). Low Factor C score is common to almost all forms of neurotic and some psychotic disorders.

The person who scores high on Factor C tends to be emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. Sometimes he may be a person making a resigned adjustment* to unsolved emotional problems.

*Shrewd clinical observers have pointed out that a good C level sometimes enables a person to achieve effective adjustment despite an underlying psychotic potential.

FACTOR E

Humble, Mild, Accommodating, Conforming
(Submissiveness)

vs.

Assertive, Independent, Aggressive, Stubborn
(Dominance)

The person who scores low on Factor E tends to give way to others, to be docile, and to conform. He is often dependent, confessing, anxious for obsessional correctness. This passivity is part of many neurotic syndromes.

The person who scores high on Factor E is assertive, self-assured, and independent-minded. He tends to be austere, a law to himself, hostile or extrapunitive, authoritarian (managing others), and disregards authority.

FACTOR F

Sober, Prudent, Serious, Taciturn
(Desurgency)

vs.

Happy-go-lucky, Impulsively Lively, Gay, Enthusiastic
(Surgency)

The person who scores low on Factor F tends to be restrained, reticent, introspective. He is sometimes dour, pessimistic, unduly deliberate, and considered smug and primly correct by observers. He tends to be a sober, dependable person.

The person who scores high on this trait tends to be cheerful, active, talkative, frank, expressive, effervescent, carefree. He is frequently chosen as an elected leader. He may be impulsive and mercurial.

FACTOR G

Expedient, Evades Rules, Feels Few Obligations
(Weaker superego strength)

vs. ***Conscientious,*** Persevering, Staid, Rule-bound
(Stronger superego strength)

The person who scores low on Factor G tends to be unsteady in purpose. He is often casual and lacking in effort for group undertakings and cultural demands. His freedom from group influence may lead to anti-social acts, but at times makes him more effective, while his refusal to be bound by rules causes him to have less somatic upset from stress.

The person who scores high on Factor G tends to be exacting in character, dominated by sense of duty, persevering, responsible, planful, "fills the unforgiving minute." He is usually conscientious and moralistic, and he prefers hard-working people to witty companions. The inner "categorical imperative" of this essential superego (in the psychoanalytic sense) should be distinguished from the superficially similar "social ideal self" of Q_3+.

FACTOR H

Shy, Restrained, Diffident, Timid
(Threctia)

vs. ***Venturesome,*** Socially-bold, Uninhibited, Spontaneous
(Parmia)

The person who scores low on this trait tends to be shy, withdrawing, cautious, retiring, a "wallflower." He usually has inferiority feelings. He tends to be slow and impeded in speech and in expressing himself, dislikes occupations with personal contacts, prefers one or two close friends to large groups, and is not given to keeping in contact with all that is going on around him.

The person who scores high on Factor H is sociable, bold, ready to try new things, spontaneous, and abundant in emotional response. His "thick-skinnedness" enables him to face wear and tear in dealing with people and grueling emotional situations, without fatigue. However, he can be careless of detail, ignore danger signals, and consume much time talking. He tends to be "pushy" and actively interested in the opposite sex.

FACTOR I

Tough-minded, Self-reliant, Realistic, No-nonsense
(Harria)

vs. ***Tender-minded,*** Dependent, Over-protected, Sensitive
(Premsia)

The person who scores low on Factor I tends to be practical, realistic, masculine, independent, responsible, but skeptical of subjective, cultural elaborations. He is sometimes unmoved, hard, cynical, smug. He tends to keep a group operating on a practical and realistic "no-nonsense" basis.

The person who scores high on Factor I tends to be tender-minded, day-dreaming, artistic, fastidious, feminine. He is sometimes demanding of attention and help, impatient, dependent, impractical. He dislikes crude people and rough occupations. He tends to slow up group performance, and to upset group morale by unrealistic fussiness.

FACTOR L

Trusting, Adaptable, Free of Jealousy, Easy to Get on With
(Alaxia)

vs.

Suspicious, Self-opinionated, Hard to Fool
(Protension)

The person who scores low on Factor L tends to be free of jealous tendencies, adaptable, cheerful, un-competitive, concerned about other people, a good team worker.

The person who scores high on Factor L tends to be mistrusting and doubtful. He is often involved in his own ego, is self-opinionated, and interested in internal, mental life. He is usually deliberate in his actions, unconcerned about other people, a poor team member.

N.B. This factor is *not* necessarily paranoia. In fact, the data on paranoid schizophrenics are not clear as to typical Factor L value to be expected.

FACTOR M

Practical, Careful, Conventional, Regulated by External Realities, Proper
(Praxernia)

vs.

Imaginative, Wrapped up in Inner Urgencies, Careless of Practical Matters, Bohemian
(Autia)

The person who scores low on Factor M tends to be anxious to do the right things, attentive to practical matters, and subject to the dictation of what is obviously possible. He is concerned over detail, able to keep his head in emergencies, but sometimes unimaginative.

The person who scores high on Factor M tends to be unconventional, unconcerned over everyday matters, Bohemian, self-motivated, imaginatively-creative, concerned with "essentials," and oblivious of particular people and physical realities. His inner-directed interests sometimes lead to unrealistic situations accompanied by expressive outbursts. His individuality tends to cause him to be rejected in group activities.

FACTOR N

Forthright, Natural, Artless, Sentimental
(Artlessness)

vs.

Shrewd, Calculating, Worldly, Penetrating
(Shrewdness)

The person who scores low on Factor N tends to be unsophisticated, sentimental, and simple. He is sometimes crude and awkward, but easily pleased and content with what comes, and is natural and spontaneous.

The person who scores high on Factor N tends to be polished, experienced, worldly, shrewd. He is often hardheaded and analytical. He has an intellectual, unsentimental approach to situations, an approach akin to cynicism.

FACTOR O

Placid, Self-assured, Confident, Serene (Untroubled adequacy) *vs.* ***Apprehensive,*** Worrying, Depressive, Troubled (Guilt proneness)

The person who scores low on Factor O tends to be placid, with unshakable nerve. He has a mature, unanxious confidence in himself and his capacity to deal with things. He is resilient and secure, but to the point of being insensitive of when a group is not going along with him, so that he may evoke antipathies and distrust.

The person who scores high on Factor O tends to be depressed, moody, a worrier, full of foreboding, and brooding. He has a childlike tendency to anxiety in difficulties. He does not feel accepted in groups or free to participate. High Factor O score is very common in clinical groups of all types (see *Handbook*).

FACTOR Q_1

Conservative, Respecting Established Ideas, Tolerant of Traditional Difficulties (Conservatism) *vs.* ***Experimenting,*** Critical, Liberal, Analytical, Free-thinking (Radicalism)

The person who scores low on Factor Q_1 is confident in what he has been taught to believe, and accepts the "tried and true," despite inconsistencies, when something else might be better. He is cautious and compromising in regard to new ideas. Thus, he tends to oppose and postpone change, is inclined to go along with tradition, is more conservative in religion and politics, and tends not to be interested in analytical "intellectual" thought.

The person who scores high on Factor Q_1 tends to be interested in intellectual matters and has doubts on fundamental issues. He is skeptical and inquiring regarding ideas, either old or new. He tends to be more well informed, less inclined to moralize, more inclined to experiment in life generally, and more tolerant of inconvenience and change.

FACTOR Q_2

Group-dependent, A "Joiner" and Sound Follower (Group adherence) *vs.* ***Self-sufficient,*** Prefers Own Decisions, Resourceful (Self-sufficiency)

The person who scores low on Factor Q_2 prefers to work and make decisions with other people, likes and depends on social approval and admiration. He tends to go along with the group and may be lacking in individual resolution. He is not necessarily gregarious by choice; rather he needs group support.

The person who scores high on Factor Q_2 is temperamentally independent, accustomed to going his own way, making decisions and taking action on his own. He discounts public opinion, but is not necessarily dominant in his relations with others (see Factor E). He does not dislike people but simply does not need their agreement or support.

FACTOR Q_3

Undisciplined Self-conflict, Careless of Protocol, Follows Own Urges
(Low integration)

vs. ***Controlled,*** Socially-precise, Following Self-image
(High self-concept control)

The person who scores low on Factor Q_3 will not be bothered with will control and regard for social demands. He is not overly considerate, careful, or painstaking. He may feel maladjusted, and many maladjustments (especially the affective, but not the paranoid) show Q_3-.

The person who scores high on Factor Q_3 tends to have strong control of his emotions and general behavior, is inclined to be socially aware and careful, and evidences what is commonly termed "self-respect" and regard for social reputation. He sometimes tends, however, to be obstinate. Effective leaders, and some paranoids, are high on Q_3.

FACTOR Q_4

Relaxed, Tranquil, Torpid, Unfrustrated
(Low ergic tension)

vs. ***Tense,*** Frustrated, Driven, Overwrought
(High ergic tension)

The person who scores low on Factor Q_4 tends to be sedate, relaxed, composed, and satisfied (not frustrated). In some situations, his oversatisfaction can lead to laziness and low performance, in the sense that low motivation produces little trial and error. Conversely, high tension level may disrupt school and work performance.

The person who scores high on Factor Q_4 tends to be tense, excitable, restless, fretful, impatient. He is often fatigued, but unable to remain inactive. In groups he takes a poor view of the degree of unity, orderliness, and leadership. His frustration represents an excess of stimulated, but undischarged, drive.

VIII. THE SPECIAL STANDARD SCORE PROCEDURES FOR SECOND-ORDER FACTORS

It has been indicated above that the 16 PF can be scored for four broad second-order factors (and some derivations) as well as for the sixteen primaries. They consist of the following well known dimensions, for which it has recently become possible to give unique experimental definition.

I.* Adjustment vs. *Anxiety*
II. Introversion vs. *Extraversion*
III. Tenderminded Emotionality vs. *Alert Poise*
IV. Subduedness vs. *Independence*

Second-order scores are not derived from *raw* scores on the primaries but from the *stens* into which the former have first been converted. If the primary sten scores are combined, with weights as shown in the following tables, they will come out as stens for the second-orders, directly. However, they will not come out *exactly* as stens because, for convenience, whole numbers are used for

*Second-orders are labeled in Roman numerals to distinguish them from primaries, which have alphabetic designations.

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HIGH SCORERS	SCALE AND PURPOSE	LOW SCORERS
Class I. Measures of Poise, Ascendancy, Self-Assurance and Interpersonal Adequacy		
Aggressive, confident, persistent, and planful; as being persuasive and verbally fluent; as self-reliant and independent; and as having leadership potential and initiative.	**1. Do (dominance) To assess factors of leadership ability, dominance, persistence, and social initiative.**	Retiring, inhibited, commonplace, indifferent, silent and unassuming; as being slow in thought and action, as avoiding of situations of tension and decision; and as lacking in self-confidence.
Ambitious, active, forceful, insightful, resourceful, and versatile; as being ascendant and self-seeking; effective in communication; and as having personal scope and breadth of interests.	**2. Cs (capacity for status) To serve as an index of an individual's capacity for status (not his actual or achieved status). The scale attempts to measure the personal qualities and attributes which underlie and lead to status.**	Apathetic, shy, conventional dull, mild, simple, and slow; as being stereotyped in thinking; restricted in outlook and interests; and as being uneasy and awkward in new or unfamiliar social situations.
Outgoing, enterprising, and ingenious; as being competitive and forward; and as original and fluent in thought.	**3. Sy (sociability) To identify persons of outgoing, sociable, participative temperament.**	Awkward, conventional, quiet, submissive, and unassuming; as being detached and passive in attitude; and as being suggestible and overly influenced by others' reactions and opinions.
Clever, enthusiastic, imaginative, quick, informal, spontaneous, and talkative; as being active and vigorous; and as having an expressive, ebullient nature.	**4. Sp (social presence) To assess factors such as poise, spontaneity, and self-confidence in personal and social interaction.**	Deliberate, moderate, patient, self-restrained, and simple; as vacillating and uncertain in decision; and as being literal and unoriginal in thinking and judging.
Intelligent, outspoken, sharp-witted, demanding, aggressive, and self-centered; as being persuasive and verbally fluent; and as possessing self-confidence and self-assurance.	**5. Sa (self-acceptance) To assess factors such as sense of personal worth, self-acceptance, and capacity for independent thinking and action.**	Methodical, conservative, dependable, conventional, easygoing, and quiet; as self-abasing and given to feelings of guilt and self-blame; and as being passive in action and narrow in interests.
Energetic, enterprising, alert, ambitious, and versatile; as being productive and active; and as valuing work and effort for its own sake.	**6. Wb (sense of well-being) To identify persons who minimize their worries and complaints, and who are relatively free from self-doubt and disillusionment.**	Unambitious, leisurely, awkward, cautious, apathetic, and conventional; as being self-defensive and apologetic; and as constricted in thought and action.
Class II. Measures of Socialization, Maturity, Responsibility, and Intrapersonal Structuring of Values		
Planful, responsible, thorough, progressive, capable, dignified, and independent; as being conscientious and dependable; resourceful and efficient; and as being alert to ethical and moral issues.	**7. Re (responsibility) To identify persons of conscientious, responsible, and dependable disposition and temperament.**	Immature, moody, lazy, awkward, changeable, and disbelieving; as being influenced by personal bias, spite, and dogmatism; and as under-controlled and impulsive in behavior.
Serious, honest, industrious, modest, obliging, sincere, and steady; as being conscientious and responsible; and as being self-denying and conforming.	**8. So (socialization) To indicate the degree of social maturity, integrity, and rectitude which the individual has attained.**	Defensive, demanding, opinionated, resentful, stubborn, headstrong, rebellious, and undependable; as being guileful and deceitful in dealing with others; and as given to excess, exhibition, and ostentation in their behavior.
Calm, patient, practical, slow, self-denying, inhibited, thoughtful, and deliberate; as being strict and thorough in their own work and in their expectations for others; and as being honest and conscientious.	**9. Sc (self-control) To assess the degree and adequacy of self-regulation and self-control and freedom from impulsivity and self-centeredness.**	Impulsive, shrewd, excitable, irritable, self-centered, and uninhibited; as being aggressive and assertive; and as overemphasizing personal pleasure and self-gain.
Enterprising, informal, quick, tolerant, clear-thinking, and resourceful; as being intellectually able and verbally fluent; and as having broad and varied interests.	**10. To (tolerance) To identify persons with permissive, accepting, and non-judgmental social beliefs and attitude.**	Suspicious, narrow, aloof, wary, and retiring; as being passive and overly judgmental in attitude; and as disbelieving and distrustful in personal and social outlook.
Co-operative, enterprising, outgoing, sociable warm, and helpful; as being concerned with making a good impression; and as being diligent and persistent.	**11. Gi (good impression) To identify persons capable of creating a favorable impression, and who are concerned about how others react to them.**	Inhibited, cautious, shrewd, wary, aloof, and resentful; as being cool and distant in their relationships with others; and as being self-centered and too little concerned with the needs and wants of others.

HIGH SCORERS	SCALE AND PURPOSE	LOW SCORERS

Class II. Measures of Socialization, Maturity, Responsibility, and Intrapersonal Structuring of Values
(Continued)

Dependable, moderate, tactful, reliable, sincere, patient, steady, and realistic; as being honest and conscientious; and as having common sense and good judgment.	**12. Cm (communality) To indicate the degree to which an individual's reactions and responses correspond to the modal ("common") pattern established for the inventory.**	Impatient, changeable, complicated, imaginative, disorderly, nervous, restless, and confused; as being guileful and deceitful; inattentive and forgetful; and as having internal conflicts and problems.

Class III. Measures of Achievement Potential and Intellectual Efficiency

Capable, co-operative, efficient, organized, responsible, stable, and sincere; as being persistent and industrious; and as valuing intellectual activity and intellectual achievement.	**13. Ac (achievement via conformance) To identify those factors of interest and motivation which facilitate achievement in any setting where conformance is a positive behavior.**	Coarse, stubborn, aloof, awkward, insecure, and opinionated; as easily disorganized under stress or pressures to conform; and as pessimistic about their occupational futures.
Mature, forceful, strong, dominant, demanding, and foresighted; as being independent and self-reliant; and as having superior intellectual ability and judgment.	**14. Ai (achievement via independence) To identify those factors of interest and motivation which facilitate achievement in any setting where autonomy and independence are positive behaviors.**	Inhibited, anxious, cautious, dissatisfied, dull, and wary; as being submissive and compliant before authority; and as lacking in self-insight and self-understanding.
Efficient, clear-thinking, capable, intelligent, progressive, planful, thorough, and resourceful; as being alert and well-informed; and as placing a high value on cognitive and intellectual matters.	**15. Ie (intellectual efficiency) To indicate the degree of personal and intellectual efficiency which the individual has attained.**	Cautious, confused, easygoing, defensive, shallow, and unambitious; as being conventional and stereotyped in thinking; and as lacking in self-direction and self-discipline.

Class IV. Measures of Intellectual and Interest Modes

Observant, spontaneous, quick, perceptive, talkative, resourceful, and changeable; as being verbally fluent and socially ascendant; and as being rebellious toward rules, restrictions, and constraints.	**16. Py (psychological-mindedness) To measure the degree to which the individual is interested in, and responsive to, the inner needs, motives, and experiences of others.**	Apathetic, peaceable, serious, cautious, and unassuming; as being slow and deliberate in tempo; and as being overly conforming and conventional.
Insightful, informal, adventurous, confident, humorous, rebellious, idealistic, assertive, and egoistic; as being sarcastic and cynical; and as highly concerned with personal pleasure and diversion.	**17. Fx (flexibility) To indicate the degree of flexibility and adaptability of a person's thinking and social behavior.**	Deliberate, cautious, worrying, industrious, guarded, mannerly, methodical, and rigid; as being formal and pedantic in thought; and as being overly deferential to authority, custom, and tradition.
Appreciative, patient, helpful, gentle, moderate, persevering, and sincere; as being respectful and accepting of others; and as behaving in a conscientious and sympathetic way.	**18. Fe (femininity) To assess the masculinity or femininity of interests. (High scores indicate more feminine interests, low scores more masculine.)**	Outgoing, hard-headed, ambitious, masculine, active, robust, and restless; as being manipulative and opportunistic in dealing with others; blunt and direct in thinking and action; and impatient with delay, indecision, and reflection.